

MANAGEMENT OF NATURAL CAPITAL FOR SUSTAINABLE DEVELOPMENT

Why sustainable management of natural capital matters

The comprehensive value of ecosystems is frequently misrepresented in markets and economic decision-making. But the real economies that underpin our societies are themselves fundamentally rooted in the natural world. While ecosystems provide multiple health, scientific and aesthetic benefits, we must enhance our capacity to also reflect their economic value to national and local communities. As we take up the challenge of delivering the Sustainable Development Goals, capturing the ecological and economic value of healthy ecosystems enables us to speak to all three dimensions of sustainable development, including social equity and livelihoods.

The state of play

- Mangroves are being destroyed at a rate 3 - 5 times greater than the average rates of forest loss, resulting in **\$6 - \$42 billion** in economic damages and denying millions of people the ecosystem services they need to survive.
- The global net loss of the coral reef cover – around 34 million hectares over two decades – will cost the international economy an estimated **\$11.9 trillion**.
- It is estimated that ecosystem services and other non-marketed natural goods account for between **47 per cent and 89 per cent** of the so-called 'GDP of the Poor' in some large developing countries.
- Top 100 global environmental externalities are costing the economy worldwide around **\$4.7 trillion** a year in terms of the economic costs of greenhouse gas emissions, loss of natural resources, loss of nature-based services such as carbon storage by forests, climate change and air pollution-related health costs.
- **75 per cent** of the world's food crops depend at least in part on pollination.
- Between **\$235 billion and \$577 billion** worth of annual global food production relies on direct contributions by pollinators.
- Almost **90 per cent** of wild flowering plants depend to some extent on animal pollination.
- In the last 40 years, we lost nearly **a third** of the world's arable farmland due to erosion, just as the number of people to be fed from it almost doubled.
- UN Food and Agriculture Organization (FAO) estimates that as much as **40 billion tonnes** of topsoil are washed away each year; that is about **40 times the weight of Mount Everest** and it can take hundreds of years to regenerate just a single centimetre of it.
- The annual loss of opportunity due to the current over-exploitation of global fisheries is estimated at **\$50 billion**.
- The illegal trade in wildlife and timber, illegal fisheries and mineral extraction and illegal dumping of hazardous materials, is estimated at **\$70-213 billion** annually, compared to \$120 billion of official development assistance.

- Africa loses **twice as much** in illicit financial flows as it receives in international aid.
- UN Food and Agriculture Organization (FAO) estimates illegal, unreported and unregulated (IUU) fishing at **11-26 million tonnes** of fish each year, worth between **\$10 and \$23 billion**, causing depletion of fish stocks, price increase and loss of livelihoods for fishermen.
- An estimated **\$30-100 billion** is lost across the globe each year through illegal logging.
- **40 per cent** of all intrastate conflicts in the last 60 years were linked to natural resources and over **80 per cent** of major armed conflicts in the last 50 years occurred in biodiversity hotspots.

The benefits of action

- Halving deforestation rates by 2030 would reduce global greenhouse gas emissions by **1.5-2.7 gigatonnes** of CO₂ equivalent per year, avoiding damages from climate change estimated at more than **\$3.7 trillion**.
- UNEP's ProEcoServ project in South Africa, Trinidad and Tobago, Viet Nam and Chile revealed almost **\$1 billion** worth of ecosystem services.
- Coral reefs provide **\$30 billion – \$172 billion** of human welfare benefits annually.
- Some **30 million people** in coastal and island communities are totally reliant on reef-based resources as their primary means of food production, income and livelihood.
- Green products and services represent a new market opportunity - global sales of organic food and drink have been increasing by over \$5 billion a year, reaching \$46 billion in 2007 and ecotourism is the fastest-growing area of the tourism industry with an estimated increase of global spending of 20 per cent annually.
- Approaches such as Net Positive Impact, wetland mitigation and bio-banking can help ensure that developers take responsibility for their environmental footprint.
- By 2020 the annual market size for certified agricultural products is expected to be \$210 billion, payments for water related ecosystem services - \$6 billion and voluntary biodiversity offsets – around \$100 million a year.
- Removing perverse incentives to fisheries of more than \$35 billion a year would limit overfishing and degradation of marine ecosystems.

Change across the globe

A study of 11 ecosystems services provided by the 25,000 square kilometres of Leuser forest in Indonesia's Aceh Province found that protecting and selectively using the forest would bring benefits of **\$9.1-9.5 billion** to the region over 30 years. The findings of the study served to implement a conservation programme in the Ulu Masen Ecosystem, north of Leuser, which is expected to prevent **100 million tonnes CO₂** of carbon emissions from avoided deforestation.

- An analysis of annual visits to Finland's national parks and other key protected areas showed a contribution of **€108.3 million per year**, demonstrating that **each euro invested** in national parks and other key protected areas brought a **tenfold return** to local economies. These statistics have informed Finland's decision in 2010 not to cut the budget of Metsähallitus - Natural Heritage Services.
- Local authorities in Canberra, Australia have planted **400,000 trees** to regulate the city's microclimate and reduce pollution, as well as store and sequester carbon, following an

analysis that estimated benefits from these services at some **\$20-67 million** over a five-year period.

- The Nakivubo Swamp, linking the Ugandan capital Kampala with Lake Victoria, was found to have a value of up to **\$1.75 million per year** in the city's wastewater purifying services and retaining nutrients. On the basis of this economic argument, plans to drain and reclaim the wetland were reversed and Nakivubo was designated as part of the city's greenbelt zone.